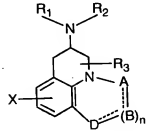
CLAIMS:

1. A method of treating a human suffering from, or susceptible to, a disease condition known to result in, or from, loss of neuronal cells or loss of neuronal cell function by reducing loss of neuronal cells or neuronal cell function resulting from such disease condition, said method comprising the step of administering to said human a neuroprotective amount of a compound of formula (A)



(A)

or a pharmaceutically acceptable salt, wherein in formula (A),

R_1, R_2 and R_3 are the same or different and are:

-H,

C_1-C_6 alkyl,

C_3-C_5 alkenyl,

C_3-C_5 alkynyl,

C_3-C_5 cycloalkyl,

C_4-C_{10} cycloalkyl,

phenyl substituted C_1-C_6 alkyl,

$-NR_1R_2$ where R_1 and R_2 are cyclized with the attached nitrogen atom to produce pyrrolidiyl, piperidinyl, morphoninyl, 4-methyl piperazinyl or imidazolyl;

X is:

-H,

C_1-C_6 alkyl,

-F, -Cl, -Br, -I,

-OH,

C_1-C_6 alkoxy,

cyano,

carboxamide,

carboxyl,

(C_1-C_6 alkoxy)carbonyl,

A is:

CH,

CH_2,

CH-(halogen) where halogen is -F, -Cl, -Br, -I,

$CHCH_3$,

C=O,

C=S,

$C\text{-}SCH_3$,

C=NH,

$C\text{-}NH_2$,

$C\text{-}NHCH_3$,

$C\text{-}NHCOOCH_3$,

C-NHCN,

SO_2,

N;

B is:

CH_2,

CH,

CH-(halogen) where halogen is as defined above,

C=O,

N,

NH,

$N\text{-}CH_3$,

D is:

CH,

CH_2,

CH-(halogen) where halogen is as defined above,

C=O,

O,

N,

NH,

$N\text{-}CH_3$;

and n is 0 or 1, and where ⎯ is a single or double bond, with the provisos:

(1) that when n is 0, and

A is CH_2, CH-(halogen) where halogen is as defined above, $CHCH_3$, C=O, C=S, C=NH, SO_2;

then D is CH_2, CH-(halogen) where halogen is as defined above, C=O, O, NH, $N\text{-}CH_3$;

(2) that when n is 0, and

A is CH, $C\text{-}SCH_3$, $C\text{-}NH_2$, $C\text{-}NHCH_3$, $C\text{-}NHCOOCH_3$, C-NHCN, N; then

D is CH, N;

(3) that when n is 1, and

A is CH_2, CH-(halogen) where halogen is as defined above, $CHCH_3$, C=O, C=S, C=NH, SO_2; and

B is CH_2, CH-(halogen) where halogen is as defined above, C=O, NH, $N\text{-}CH_3$; then

D is CH_2, C=O, O, NH, $N\text{-}CH_3$;

(4) that when n is 1, and

A is CH, $C\text{-}SCH_3$, $C\text{-}NH_2$, $C\text{-}NHCH_3$, $C\text{-}NHCOOCH_3$, C-NHCN, N; and

B is CH, N; then

D is CH_2, C=O, O, NH, $N\text{-}CH_3$;

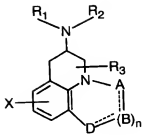
(5) that when n is 1, and

A is CH_2, $CHCH_3$, C=O, C=S, C=NH, SO_2, and

B is CH, N; then

D is CH, N; and pharmaceutically acceptable salts thereof to the human.

2. A method for preventing neuronal damage or the progression of neuronal damage in a patient suffering from or susceptible to such neuronal damage, said method comprising administering to the patient a neuroprotective amount of a compound of formula (A)



(A)

or a pharmaceutically acceptable salt, wherein in formula (A),

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-H,

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C_3-C_5 alkenyl,

C_3-C_5 alkynyl,

C_3-C_5 cycloalkyl,

C_4-C_{10} cycloalkyl,

phenyl substituted C_1-C_6 alkyl,

$-NR_1R_2$ where R_1 and R_2 are cyclized with the attached nitrogen atom to produce pyrrolidiyl, piperidinyl, morphoninyl, 4-methyl piperazinyl or imidazolyl;

X is:

-H,

C_1-C_6 alkyl,

-F, -Cl, -Br, -I,

-OH,

C_1-C_6 alkoxy,

cyano,

carboxamide,

carboxyl,

(C_1-C_6 alkoxy)carbonyl,

A is:

CH,

CH_2,

CH-(halogen) where halogen is -F, -Cl, -Br, -I,

$CHCH_3$,

C=O,
C=S,
C-SCH_3,
C=NH,
C-NH_2,
C-$NHCH_3$,
C-$NHCOOCH_3$,
C-NHCN,
SO_2,
N;

B is:

CH_2,
CH,
CH-(halogen) where halogen is as defined above,
C=O,
N,
NH,
N-CH_3,

D is:

CH,
CH_2,
CH-(halogen) where halogen is as defined above,
C=O,
O,
N,
NH,
N-CH_3;

and n is 0 or 1, and where ⎯ is a single or double bond, with the provisos:

(1) that when n is 0, and

A is CH_2, CH-(halogen) where halogen is as defined above, $CHCH_3$, C=O, C=S, C=NH, SO_2;

then D is CH_2, CH-(halogen) where halogen is as defined above, C=O, O, NH, N-CH_3;

(2) that when n is 0, and

A is CH, C-SCH_3, C-NH_2, C-$NHCH_3$, C-$NHCOOCH_3$, C-NHCN, N; then

D is CH, N;

(3) that when n is 1, and

A is CH_2, CH-(halogen) where halogen is as defined above, $CHCH_3$, C=O, C=S, C=NH, SO_2; and

B is CH_2, CH-(halogen) where halogen is as defined above, C=O, NH, N-CH_3; then

D is CH_2, C=O, O, NH, N-CH_3;

(4) that when n is 1, and

A is CH, C-SCH_3, C-NH_2, C-$NHCH_3$, C-$NHCOOCH_3$, C-NHCN, N; and

B is CH, N; then

D is CH_2, C=O, O, NH, N-CH_3;

(5) that when n is 1, and

A is CH_2, $CHCH_3$, C=O, C=S, C=NH, SO_2, and

B is CH, N; then

D is CH, N; and pharmaceutically acceptable salts thereof to the human.

3. A method according to claim 1 or 2 wherein the disease condition is selected from Parkinson's disease, primary neurodegenerative disease; Huntington's Chorea; stroke and other hypoxic or ischemic processes; neurotrauma; metabolically induced neurological damage; sequelae from cerebral seizures; hemorrhagic stroke; secondary neurodegenerative disease (metabolic or toxic); Alzheimer's disease, other memory disorders; or vascular dementia, multi-infarct dementia, Lewy body dementia, or neurogenerative dementia.

4. A method according to claim 3 wherein the disease condition is Parkinson's disease.

5. A method according to claim 1 or 2 wherein the compound of formula (A) is administered orally, intra-nasally, buccally, intra-pulmonary, parenterally and rectally.

6. A method according to claim 5 wherein the compound of formula (A) is administered orally.

7. A method according to claim 1 or 2 wherein the neuroprotective amount is from about 0.2 to about 8 mg/person/dose.

8. A method according to claim 7 where the neuroprotective amount is from about 0.5 to about 5 mg/person/dose.

9. A method according to claim 8 wherein the neuroprotective amount is from about 1 to about 3 mg/person/dose.

10. A method according to claim 1 or 2 wherein the pharmaceutically acceptable salt is selected from the group consisting of salts of the following acids methanesulfonic, hydrochloric, hydrobromic, sulfuric, phosphoric, nitric, benzoic, citric, tartaric, fumaric, maleic, CH_3-$(CH_2)_n$-COOH where n is 0 thru 4, HOOC-$(CH_2)_N$-COOH where n is as defined above.

11. A method according to claim 1 or 2 wherein the compound of formula (A) is (5R)-(methylamino)-5,6-dihydro-4H-imidazo[4,5,1-ij]quinolin-2(1H)-one or a pharmaceutically acceptable salt thereof.

12. A method according to claim 11 where the pharmaceutically acceptable salt of (5R)-(methylamino)-5,6-dihydro-4H-imidazo[4,5,1-ij]quinolin-2(1H)-one is (5R)-(methylamino)-5,6-dihydro-4H-imidazo[4,5,1-ij]quinolin-2(1H)-one (Z)-2-butenedioate (1:1).

13. A method according to claim 1 or 2 where the compound of formula (A) is (5R)-(methylamino)-5,6-dihydro-4H-imidazo[4,5,1-ij]quinolin-2(1H)-thione or a pharmaceutically acceptable salt thereof.

14. A method according to claim 13 where the pharmaceutically acceptable salt of (5R)-(methylamino)-5,6-dihydro-4H-imidazo[4,5,1-ij]quinolin-2(1H)-thione is (5R)-(methylamino)-5,6-dihydro-4H-imidazo[4,5,1-ij]quinolin-2(1H)-thione (Z)-2-butenedioate (1:1).